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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,675	07/08/2005	Yves Demars	272862US6PCT	4105
22850	7590	03/06/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
LEE, DANIEL H.				
ART UNIT		PAPER NUMBER		
4122				
NOTIFICATION DATE		DELIVERY MODE		
03/06/2009		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com

oblonpat@oblon.com

jgardner@oblon.com

# Office Action Summary

**Application No.**

10/541,675

**Applicant(s)**

DEMARS ET AL.

**Examiner**

DANIEL LEE

**Art Unit**

4122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 25-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date 20050708
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**2. Claims 25-28, 32-48 rejected under 35 U.S.C. 102(b) as being anticipated by Lenhardt (US 4911779).**

3. Regarding claim 25, Lenhardt teaches a tool holder device (col. 16, line 56; carriage 34) supporting at least one tool (col. 16, line 54; nozzle 36) configured to collaborate with at least one substrate (col. 16, line 66; glass plates 31 and 32) positioned on edge (col. 11, lines 21-22; bottom edge-supporting conveyor), the device configured to make the at least one tool move translationally and rotationally relative to the at least one substrate (col. 16, lines 53-63; movable up and down... rotation in steps), it being possible for the at least one substrate to be moved translationally relative to the at least one tool as the at least one tool is operating, wherein collaboration between the at least one tool and the at least one substrate occurs with or without contact relative to an edge face of the at least one substrate (see Figure 1).

4. Regarding claim 26, Lenhardt teaches the device is controlled via a control loop to ensure precise positioning of the at least one tool relative to the at least one substrate (col. 17, lines 67-68; nozzle may be controlled).

5. Regarding claim 27, Lenhardt teaches the devices comprises means for compensating for position of the at least one substrate (col. 17, line 66; responsive to the position of the glass plates) and at least one position sensor wherein the means for compensating and the at least one position sensor are configured to be associated with the at least one tool (col. 17, line 65; a sensor which leads the nozzle 36).
6. Regarding claim 28, Lenhardt teaches the at least one tool comprises means for treating the at least one substrate (col. 18, lines 29-31; nozzle 36 also discharges the initially pastelike composition into the space between the glass plates).
7. Regarding claim 32, Lenhardt teaches the device comprises a rotary support on which the at least one tool is fixed and a linear guidance element with which the rotary support collaborates, the support being prevented from rotating when moved translationally by the linear guidance element (see col. 16, lines 53-63; nozzle 36 is mounted on a carriage 34 and is movable up and down... rotation in steps).
8. Regarding claim 33, Lenhardt teaches the device comprises a vertical beam (col. 4, line 19; vertical orientation) provided with the rotary support and with the linear guidance element (mentioned above in para. 7) extending at least partially over a height of the beam (col. 4, lines 63-64; additional backing means).
9. Regarding claim 34, Lenhardt teaches the device comprises a first tool configured to move translationally and/or rotationally, and a second tool arranged fixedly and configured to operate while the at least one substrate is moving translationally (col. 19, lines 35-37; two nozzles... arranged and movable).

**10.** Regarding claim 35, Lenhardt teaches the rotational and translational movements of the at least one tool and the control loop control of the device are controlled by a numerical control (col. 17, line 66 to col. 18, line 2; nozzle may be controlled by a displacement encoder in dependence on previously taken measurements of the size of the glass).

**11.** Regarding claim 36, Lenhardt teaches an installation comprising a tool holder device (see above) and at least one module for progressing, holding, and positioning the at least one substrate in X, Y, Z directions of space facing the tool holder device (col. 3, lines 38-39; first vacuum-applying conveyor).

**12.** Regarding claim 37, Lenhardt teaches that the at least one module for progressing, holding, and positioning comprises a fixed chassis (col. 11, lines 21-22; bottom edge-supporting conveyor) that comprises a substantially vertical stand (col. 4, lines 22-23; glass plates are conveyed in an approximately vertical orientation), means for holding and positioning a substrate against the stand in the X and Y direction, and means for holding and positioning the substrate in the Z-direction (col. 4, lines 17-18; apparatus can be designed to convey plates in any desired orientation).

**13.** Regarding claim 38, Lenhardt teaches the installation wherein the means for holding and positioning is controlled through a control loop (col. 17, lines 30-31; detected before the glass plates enter... sensors provided).

**14.** Regarding claim 39, Lenhardt teaches these chassis collaborate with one another to each support at least one substrate, the substrates being placed facing each other and positioned relative to one another with a given separation (see col. 3, lines

34-64; until the second glass plate is also in the predetermined position in register with the first glass plate... predetermined transverse spacing).

**15.** Regarding claim 40, Lenhardt teaches the fixed chassis and the moving chassis are open in their upper part so as to support substrates of any dimensions (col. 3, lines 8-9; vacuum-applying conveyors act only on the outer broadsides of the plates).

**16.** Regarding claim 41, Lenhardt teaches the moving chassis comprises means for positioning, in the Z-direction, the substrate resting on the moving chassis so as to obtain a desired separation between the two substrates (see col. 3, esp. lines 35-37; plates can be properly spaced apart by means of two vacuum-applying conveyors).

**17.** Regarding claim 42, Lenhardt teaches the moving chassis comprises means for holding and positioning, in the X-direction, the two substrates resting on the fixed and moving chassis, the means for holding and positioning configured to be moved in the Z-direction independently of the moving chassis (see col. 3, esp. lines 54-56; Adjusting means for changing the distance between the two mutually opposite vacuum-applying conveyors are known to those skilled in the art).

**18.** Regarding claim 43, Lenhardt teaches the at least one module comprises means for transferring a substrate supported by the fixed chassis to the moving chassis (col. 3, lines 38-43; second ... conveyor... suck and take over that glass plate).

**19.** Regarding claim 44, Lenhardt teaches an installation wherein the means for holding and positioning a substrate comprises conveyor belts and suction means for holding the substrate tightly against the conveyor belts (col. 2, lines 60-61; vacuum-applying conveyors... contact the two plates).

**20.** Regarding claim 45, Lenhardt teaches the installation comprises an additional high-performance suction device to generate a tangential holding force holding the substrate at the end of the at least one module (col. 3, lines 40-43; second vacuum-applying conveyor... suck and take over that glass plate).

**21.** Regarding claim 46, Lenhardt teaches the installation wherein a holding system using suction cups is provided (col. 3, line 33; suction force), associated with the at least one module, for routing, from the at least one module to an adjacent support element, a substrate which, in the X-direction, has a dimension substantially equivalent to or smaller than a space separating the module from the support element adjacent to the at least one module (see Figure 1; 2a).

**22.** Regarding claim 47, Lenhardt teaches plural modules for progressing, holding, and positioning substrates, which may or may not be electronically coupled depending on lengths of the substrates (modules discussed above; col. 17, end to col. 18, line 1; dependence on previously taken measurements of the size of the glass plates).

**23.** Regarding claim 48, Lenhardt teaches the at least one module for progressing, holding, and positioning constitutes a module for preassembling and/or assembling an insulating glazing comprising at least two glass substrates and an interlayer secured to all or part of a periphery of the at least two glass substrates (col. 18, lines 13-15; discharges an extrusion... in the space between the glass plates and along their top edge).

***Claim Rejections - 35 USC § 103***

24. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**26. Claims 29-31 rejected under 35 U.S.C. 103(a) as being unpatentable over Lenhardt (US 4911779) in view of Applicant's admission.**

27. The teachings of Lenhardt are detailed in the rejection of claims 25-28 and 32-48 under 35 U.S.C. 102(b) above.

28. Regarding claim 29, Lenhardt does not expressly teach the elements claimed. Applicant admits the teaching of the at least one tool comprising means for applying and bonding an interlayer to all or part of a periphery and to the edge faces of at least two substrates facing each other (spec., pg. 1, lines 32-37).

29. Regarding claim 30, Lenhardt teaches the control of a tool associated with the glass plates (col. 17, line 67 to col. 18, line 2; controlled). Applicant admits the teaching



of the at least two press rollers each configured to press against one of the edge faces of the two substrates (pg. 1, lines 32 - end).

**30.** Regarding claim 31, Lenhardt teaches the sensor as discussed above, but does not expressly teach that it is associated with the press rollers.

**31.** It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the sensor of Lenhardt to control the process rollers admitted by the Applicant. The rationale to do so would be to make the process rollers work with the glass plates in a controllable manner dependent on some measurable parameter of the glass as taught by Lenhardt (col. 17, end to col. 18, line 2; controlled by... dependence on previously take measurements of the size of the glass).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIEL LEE whose telephone number is (571)270-7711. The examiner can normally be reached on Monday-Thursday, 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571)272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. L./  
Examiner, Art Unit 4122

/Timothy J. Kugel/  
Primary Examiner, Art Unit 1796